**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

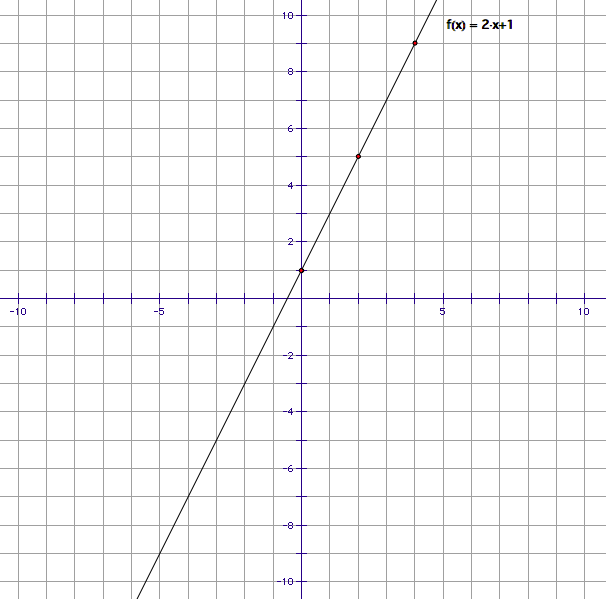
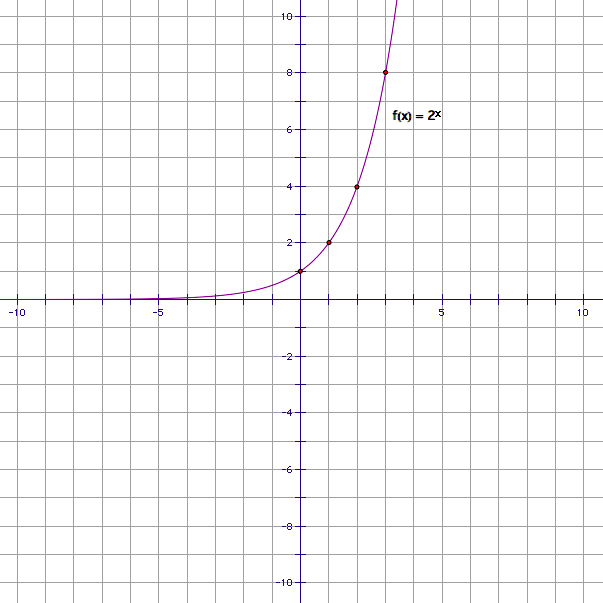
**Exploring Symmetry**

**Use the transformations of reflecting the given graph over the y-axis**

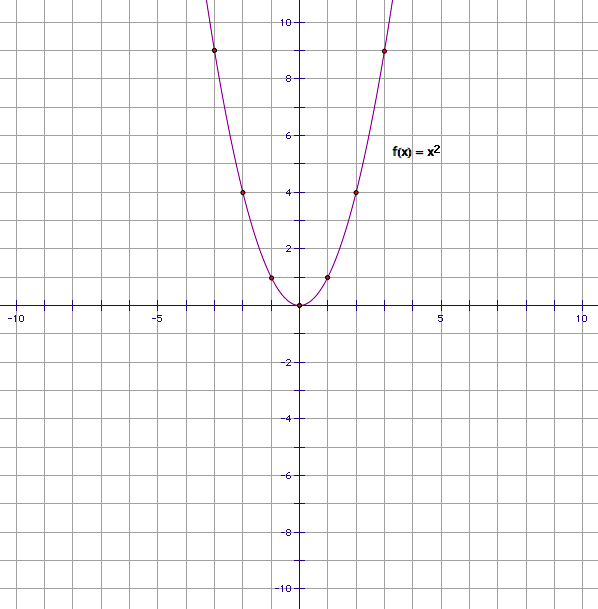
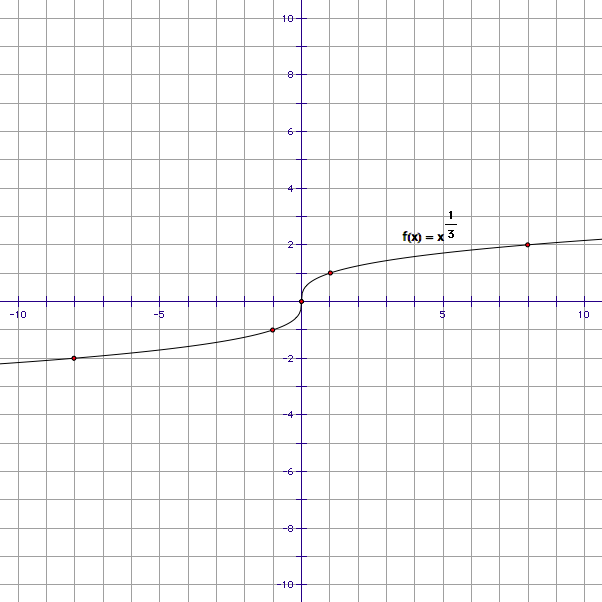
Reflection over the *y*-axis

**For each of the following functions, sketch the graph of the function and the transformed image for your assigned transformation. Then for each function, answer the analysis questions below.**

Function 1:  Function 2: 

Function 3:  Function 4: 

**Analysis Questions:**

1. Did the transformed image map the function onto itself or did it create a new image?

Function 1: 

Function 2: 

Function 3: 

Function 4: 

1. Is the transformed image a functional relationship? If so, use the function toolbox to identify the type of function that was produced.

Function 1: 

Function 2: 

Function 3: 

Function 4: 

1. How does the transformed image compare to the original function? What features are the same, what unique features does the transformed image have?

Function 1: 

Function 2: 

Function 3: 

Function 4: 

**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

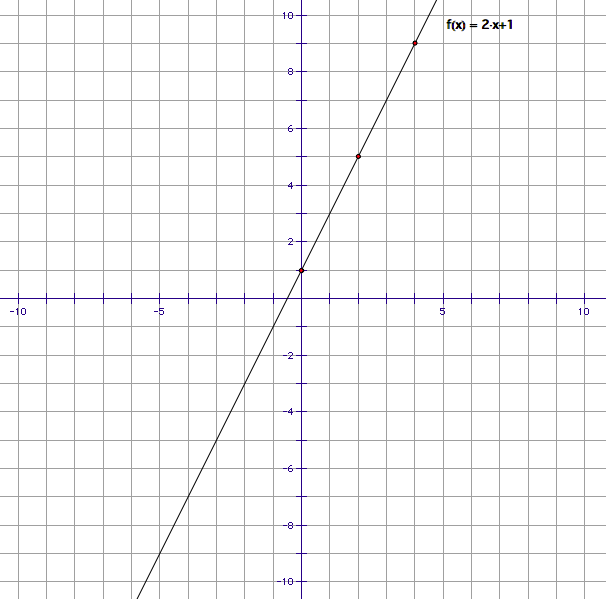
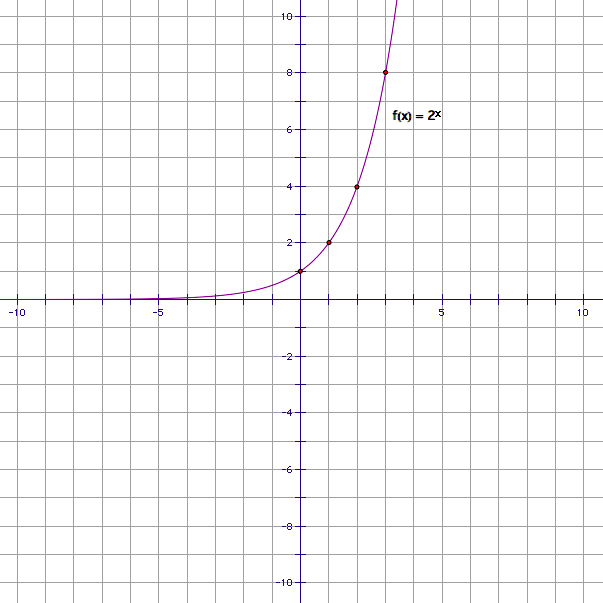
**Exploring Symmetry**

**Use the transformations of reflecting the given graph over the x-axis**

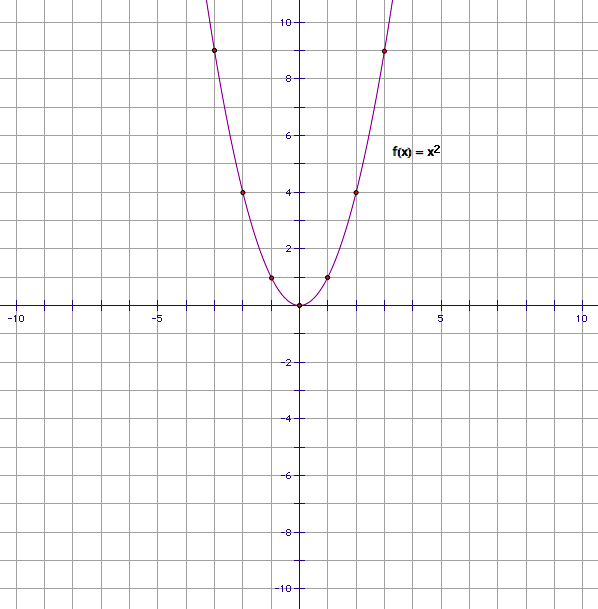
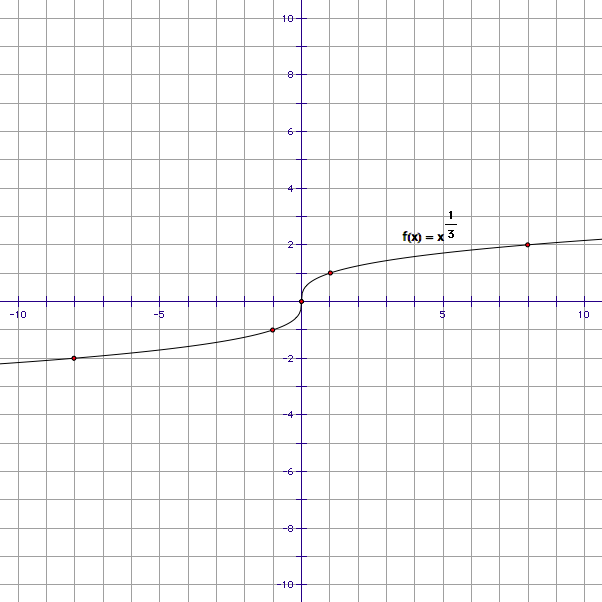
Reflection over the *x*-axis

**For each of the following functions, sketch the graph of the function and the transformed image for your assigned transformation. Then for each function, answer the analysis questions below.**

Function 1:  Function 2: 

Function 3:  Function 4: 

**Analysis Questions:**

1. Did the transformed image map the function onto itself or did it create a new image?

Function 1: 

Function 2: 

Function 3: 

Function 4: 

1. Is the transformed image a functional relationship? If so, use the function toolbox to identify the type of function that was produced.

Function 1: 

Function 2: 

Function 3: 

Function 4: 

1. How does the transformed image compare to the original function? What features are the same, what unique features does the transformed image have?

Function 1: 

Function 2: 

Function 3: 

Function 4: 

**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

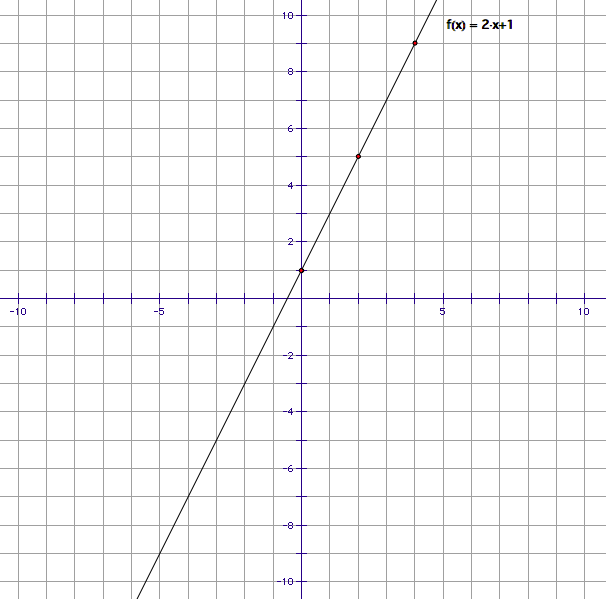
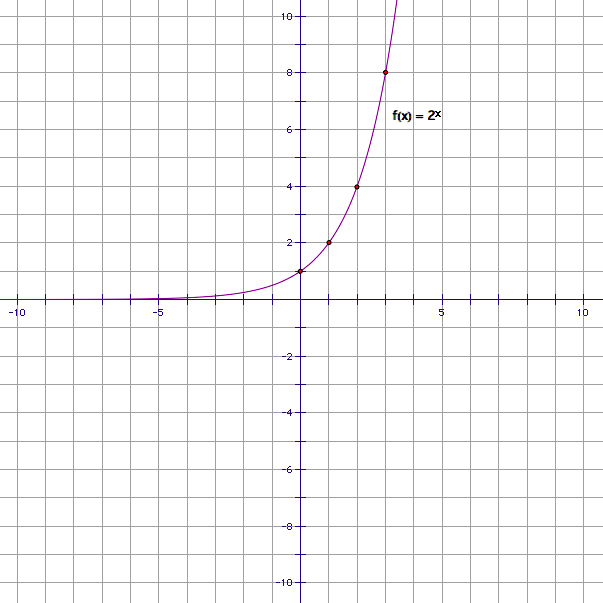
**Exploring Symmetry**

**Use the transformations of reflecting the given graph over the line y=x**

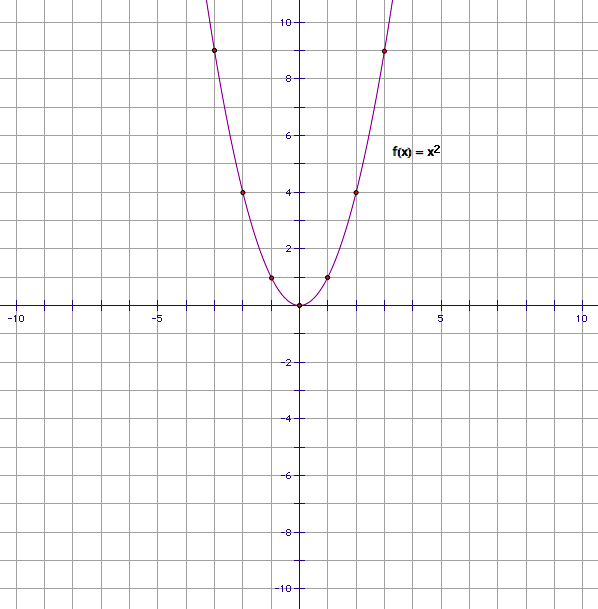
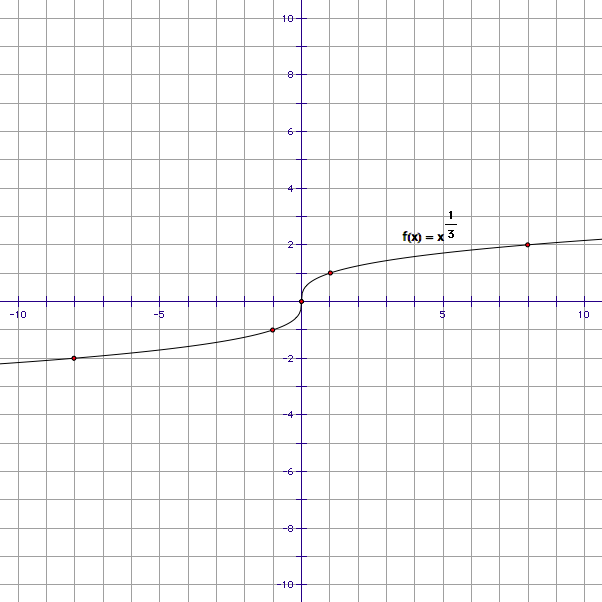
Reflection over the *line y=x*

**For each of the following functions, sketch the graph of the function and the transformed image for your assigned transformation. Then for each function, answer the analysis questions below.**

Function 1:  Function 2: 

Function 3:  Function 4: 

**Analysis Questions:**

1. Did the transformed image map the function onto itself or did it create a new image?

Function 1: 

Function 2: 

Function 3: 

Function 4: 

1. Is the transformed image a functional relationship? If so, use the function toolbox to identify the type of function that was produced.

Function 1: 

Function 2: 

Function 3: 

Function 4: 

1. How does the transformed image compare to the original function? What features are the same, what unique features does the transformed image have?

Function 1: 

Function 2: 

Function 3: 

Function 4: 

**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

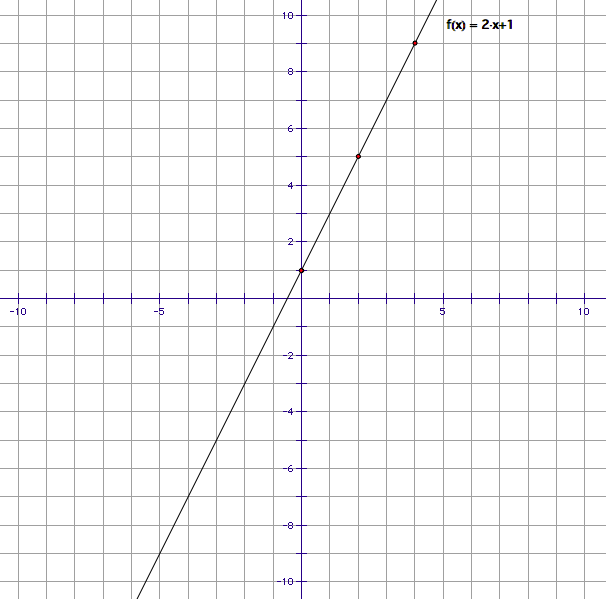
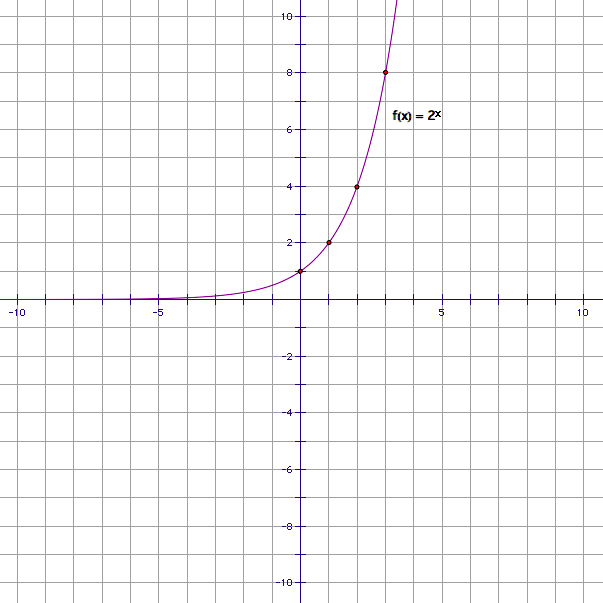
**Exploring Symmetry**

**Use the transformations of reflecting the given graph over the origin.**

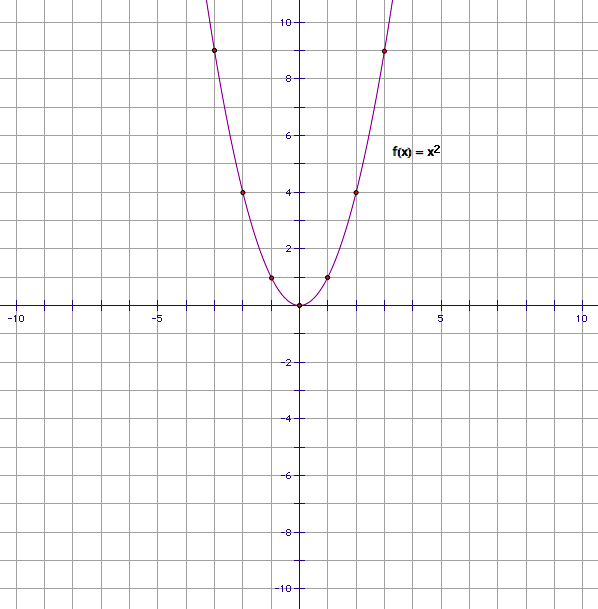
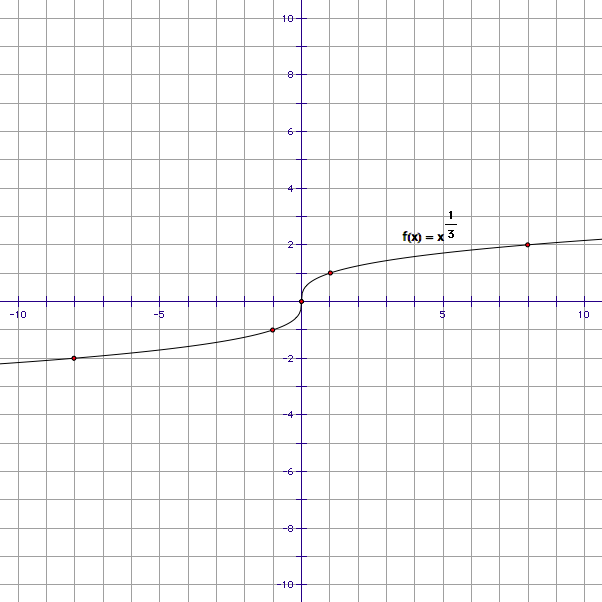
Reflection 180 degrees about the origin.

**For each of the following functions, sketch the graph of the function and the transformed image for your assigned transformation. Then for each function, answer the analysis questions below.**

Function 1:  Function 2: 

Function 3:  Function 4: 

**Analysis Questions:**

1. Did the transformed image map the function onto itself or did it create a new image?

Function 1: 

Function 2: 

Function 3: 

Function 4: 

1. Is the transformed image a functional relationship? If so, use the function toolbox to identify the type of function that was produced.

Function 1: 

Function 2: 

Function 3: 

Function 4: 

1. How does the transformed image compare to the original function? What features are the same, what unique features does the transformed image have?

Function 1: 

Function 2: 

Function 3: 

Function 4: 